ABSTRACT OF THE DISCLOSURE

The present invention provides a method of constructing a circular DNA library having an increased content of a desired first dsDNA by removing a second dsDNA using RecA protein to introduce a target single strand nucleic acid by homologous recombination at the 3' terminal portion of the second dsDNA, whereby the target DNA has a 3' terminal portion that differs from the 3' terminal portion of the second dsDNA to prevent circularization, thereby creating a triple stranded DNA portion at the 3' terminal end of the second dsDNA, adding Exonuclease I to digest the displaced first strand of the second dsDNA, ligating the DNA fragments to circularize the desired first dsDNA, removing the linear second dsDNA, thereby constructing the circularized DNA library having an increased content of the desired first dsDNA.